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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/607,138

06/27/2003

Michael Hack

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23838

7590

01/04/2005

KENYON & KENYON
1500 K STREET, N.W., SUITE 700
WASHINGTON, DC 20005

EXAMINER

NGUYEN, THINH T

ART UNIT

PAPER NUMBER

2818

DATE MAILED: 01/04/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/607,138

Applicant(s)

HACK ET AL.

Examiner

Thinh T Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 November 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 and 23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9, 23 is/are rejected.
- 7) ☐ Claim(s) 1, 4 and 23 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 June 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED OFFICE ACTION

1. Applicant election of claim 1-9 for prosecution of the present application without traverse in the communication with the office on 11/1/2004 is acknowledged.
2. Claims 1-9 and newly added claim 23 are pending in the application.

Drawings

- 3 The drawings are objected to under 37 CFR 1.84(h)(5) because of inconsistencies in the drawings. Figure 6 and fig 17 are objected to since they fail to show the light arrows as in fig 5, fig 11, fig 12 to indicate that the diodes are either photo emissive or photo-sensing.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the

drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

4. The specification is objected to for failing to enable the invention and make it non-compliant with 35 U.S.C. 112 first paragraph.

Applicant express the desire in the communication with the office on 11/1/2004 that applicant want to claim in claim 1 and claim 23 a **light emitting device** and not a **light emitting diode**.

However, there are not enough disclosure in the specification or the drawings showing the connections to include a **light-emitting device that is not an organic light emitting diode(OLED) or Light emitting Diode for example a three terminals light emitting device like an organic thyristor**.

A person of ordinary skill in the art at the time the invention was made would not be able to make use of the invention of claim 1 or 23 **and apply those inventions to light emitting device that is not an organic light emitting diodes or regular light emitting diode**.

5. The specification has been checked to the extent necessary to determine the presence of all possible minor errors. However, the applicant cooperation is requested in correcting any errors of which the applicant may become aware in the specification.

Claim objections

6. Claim 1 and 23 are objected to for the recitation:

-- "light emitting device"--

There are not enough disclosures in the specification or the drawings to support **the inclusion in these claims for a bistable light-emitting device that is not a light emitting diodes (an Organic light emitting 3 terminal transistor for example)** and therefore those claims are not compliant with 35 U.S.C 112 first paragraph, which require the invention to be enabling.

The Applicant is respectfully reminded that light emitting device cover a very broad range device.

Correction is required. Applicant must be careful not to introduce new matter in the claim or the specification.

7. Claim 4 is objected to being an improper dependant claim since it depends on claim 1 there is no second light-emitting device in claim 1. The recitation of claim 4 therefore lacks antecedent basis.

Correction is required. Applicant must be careful not to introduce new matter in the claim or the specification.

8. Claim 23 is objected to since the specification or the drawing fails to clearly show this

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invention. Can the Applicant shows an embodiment in the drawings that is generic to both Claim 3 of species I and claim 18 species III as mentioned in the reply by the Applicant on December 01/2004?

Correction is required. Applicant must be careful not to introduce new matter in the claim or the specification.

Claim Rejections - 35 USC § 102

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102(b/e) that form the basis for the rejections under this section made in this office action.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

10. To Expedite the prosecution of the Application, the Examiner assume that the Applicant will correct the Objected claims to make them in compliance with 35 U.S.C. 112 and the examiner will examine those claims as best as it can be understood.

Claims 1,2,9 are rejected under 35 U.S.C. 102(e) as being anticipated by Kimura (U.S. Patent Application Publication US 2002/0122123 A1).

REGARDING CLAIM 1

Kimura (fig 3B, fig 3C,.fig 7,paragraph [0084]) discloses a pixel having a plurality of

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bistable subpixels, each subpixel having an ON state and an OFF state, a plurality of power lines (fig 7), wherein a different power line is coupled to each bistable subpixel; and circuitry connected to the plurality of power lines, wherein the circuitry is capable of individually modulating the pulse width of a power signal transmitted through each power line) wherein each subpixel includes a first light emitting device that emits light when the subpixel is in the ON state; and wherein each subpixel has substantially the same size and emits substantially the same spectrum of light in the ON state.

REGARDING CLAIM 2

Kimura (fig 8 paragraph [0102]) discloses a pixel with a plurality of subpixels, wherein each subpixel comprises a photodetector that detects the light emitted by the first light emitting device and provides feedback which is used to maintain the subpixel in the ON state.

REGARDING CLAIM 9

Kimura (fig 8, element 115, paragraph [0127])disclose a device that comprises an organic light emitting device.

11. Claim 23 is rejected under 35 U.S.C. 102(e) as being anticipated by Okamoto (US patent Application Publication US 2002/0140642)

REGARDING CLAIM 23

Okamoto (the abstract, fig 1,fig 16, paragraph [0091] discloses a device, comprising: a pixel having a plurality of bistable subpixels { fig 16 reference 4-1 4-2,) each subpixel having an ON state and an OFF state; a plurality of power lines (fig 1 lines Vref and Vd,) wherein a different power line is coupled to each bistable subpixel; and circuitry connected to the plurality of power lines, wherein the circuitry is capable of individually controlling a power signal

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transmitted through each power line; wherein each subpixel includes a light emitting device (fig 1 element 12) that emits light when the subpixel is in the ON state; and wherein each subpixel has substantially the same size and emits substantially the same spectrum of light in the ON state.

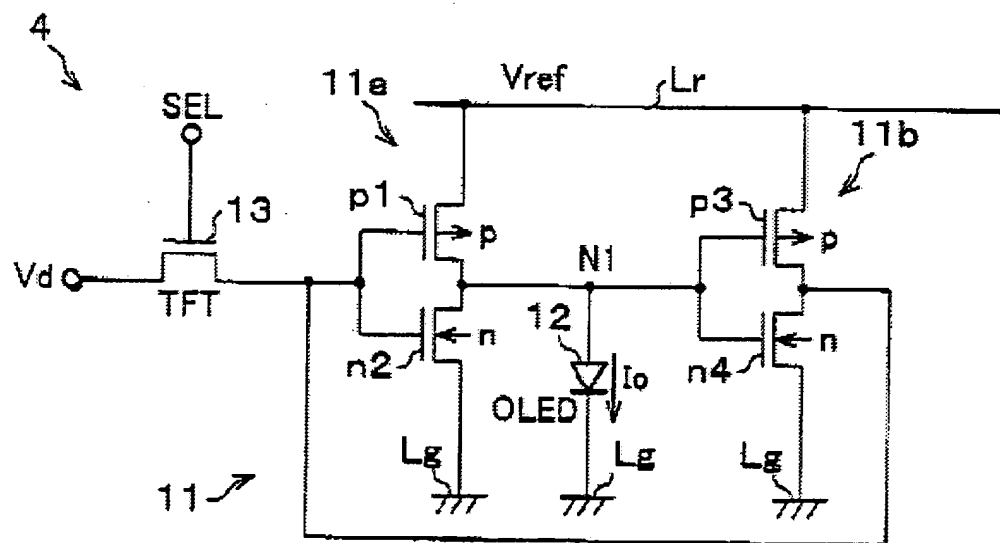
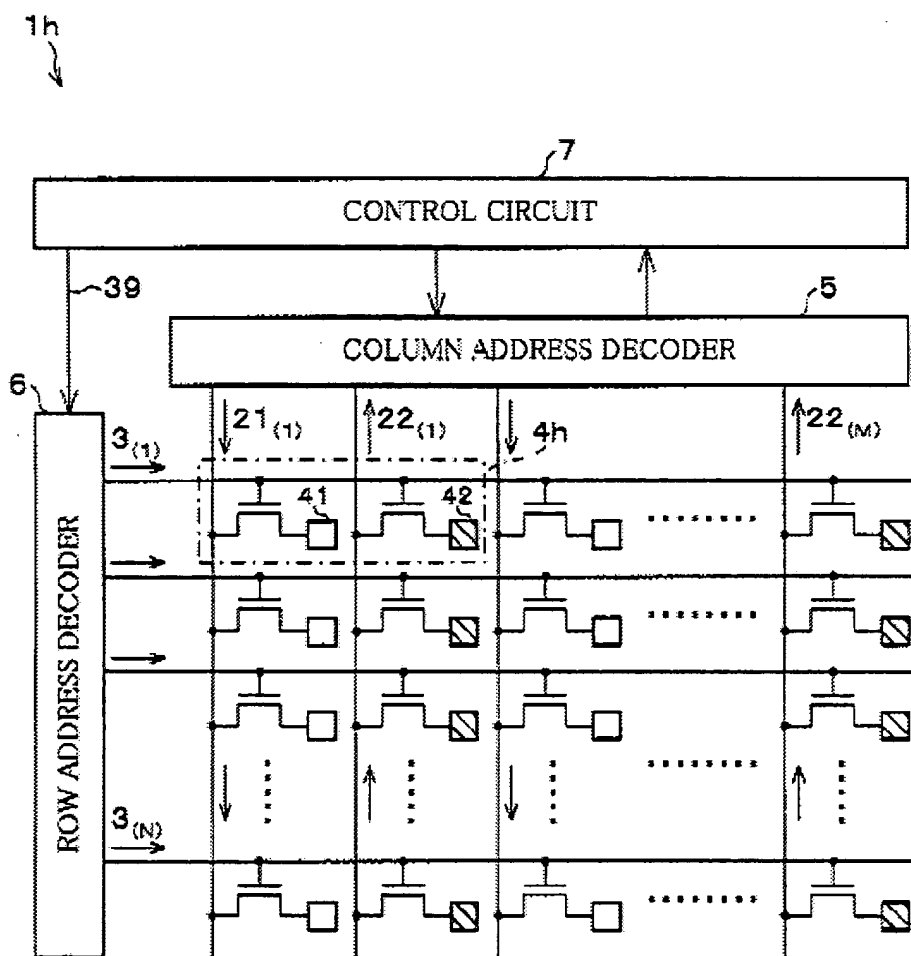
FIG. 1

FIG. 16



Claim Rejections - 35 USC § 103

12. The following is a quotation of U.S.C. 103(a) which form the basis for all obviousness rejections set forth in this office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

13. Claim 3, 4, 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kimura (US patent Application Publication 2002/0122123 A1) in view Kimura (US patent 6,611,108)

REGARDING CLAIM 3

Kimura 123 discloses all the invention except for a second light-emitting element. Kimura 108 (the abstract, fig 14A, fig 14B); however ; disclose an invention which incorporates a second light emitting element (fig 14B element 1407)

It would have been obvious to one of ordinary skill in the art the time the invention was made to complement the teachings by Kimura 123 with the teachings by Kimura 108 in order to come up with the invention of claim 3.

The rationale is as the following: a person skilled in the art would have been motivated to make the display look normal all the time as suggested by Kimura 108 in his abstract.

REGARDING CLAIM 4

Kimura 108 (fig 14A,fig 14B) discloses a device wherein the second light emitting device (device 1407 on fig 14B) is coupled to a power line (fig 14B line 1413,column 3 lines 50-51) that provides an unmodulated power signal.

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The rationale to combine the Two Kimura patent document has been discussed in the rejection of claim 3.

REGARDING CLAIM 5

Kimura 108 (fig 14A,fig 14B,column 4 lines10-12) discloses a device wherein the number of gray levels that may be emitted by the pixel is greater than the number of subpixels.

The rationale to combine the Two Kimura patent document has been discussed in the rejection of claim 3.

14. Claims 6,7,8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kimura (US patent Application Publication 2002/0122123 A1) in view Kimura (US patent 6,611,108) and in further view remark.

REGARDING CLAIM 6,7,8

The combined teachings by Kimura 123 and Kimura 108 disclose all the invention except for the different percentage of time on different pixels. This feature, known as time gradation method has become old and well known in the art.

A person of ordinary skill in the art would be able to come up with the inventions of claims 6,7,8 using the combined teachings of the two Kimura patent and his regular skills (especially with optimization and simulation software) for a purpose of improving the device.

15. When responding to the office action, Applicants are advised to provide the examiner with the line numbers and the page numbers in the application and/or references cited to assist the examiner to locate the appropriate paragraphs.

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16. A shortened statutory period for response to this action is set to expire 3 (three) months and 0 (zero) day from the day of this letter. Failure to respond within the period for response will cause the application to be abandoned (see M.P.E.P. 710.02(b)).

CONCLUSION

17. The prior arts made of record and not relied upon are considered pertinent to applicant disclosure: Lee et al. (US patent 6,720,942) disclose a flat-panel light emitting pixel with luminance feed back.

18. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thinh T Nguyen whose telephone number is 571-272-1790.

The examiner can normally be reached on Monday-Friday 9:00am-6:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Nelms can be reached at 571-272-1787.

The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

Thinh T. Nguyen 

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MICHAEL TRAN
PRIMARY EXAMINER